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#1	Time Tracking Helper
Project goals	Develop a tool that will help to track office hours of employees.
Scope definition	<p>A company X hires a lot of workers. Workers track their work-time in excel, which is not handy and error-prone.</p> <p>Project assumes development of two elements:</p> <ul style="list-style-type: none">• Chrome plugin<ul style="list-style-type: none">– track daily work hours of employee and send that information to server• Web application<ul style="list-style-type: none">– visualizes work hours (timeline)– displays additional information about work hours (week target, week overtime etc.)– sends notification to manager about employee status– generates reports
Requirements	-
Author	Mateusz Wierzbicki
Planned duration	1 semester
Team size	2-5

#2	Mobile phone DevOps alarms delivery
Project goals	Develop a tool that will notify person via android app that some system or web application has crashed and/or behaves weirdly.
Scope definition	<p>Application that has following components</p> <ul style="list-style-type: none">• Backend app<ul style="list-style-type: none">– monitors web services and generates and closes alarms when web applications are not responsive or has failing healthchecks– serves the mobile phone app• Android/mobile phone application<ul style="list-style-type: none">– Allows for subscription to alarms from particular services– Receives and displays alarms and alarm cancellations– Allows the technical stuff to “claim” the alarm (“I’m working on it” notification) <p>Extra: application can be notified about events/alarms from Sensu system. Extra: backend can be notified about application events (“App x is rebooting for upgrade. Est downtime 30 minutes”)</p>
Requirements	Any language, minimal frontend dev experience (frontend frameworks) or eager to learn Angular 2
Author	Mateusz Wronski
Planned duration	1 semester
Team size	3-5

#3	NERD - Newcomer Request Delivery
Project goals	Develop a tool that will speed up / automate newcomer enablement process by adding new user to projects, sending mail requests or manuals, and creating Jira tickets via REST API.
Scope definition	<p>Manager wants to give access rights to tools required to work with project for every member that joins development team (Jenkins, application server, Jira, confluence, GIT repository, etc). There also must be mail notifications to development team and product owner about new team member. Newcomer should get mail with set of instructions/manuals/requirements.</p> <p>There are two steps:</p> <ul style="list-style-type: none">• Project configuration in NERD Tool:<ul style="list-style-type: none">– Add email sending function:<ul style="list-style-type: none">* Configure target email and message/content. Mail message template can be edited with BBCode or Markdown.• Add jira ticket creation function:<ul style="list-style-type: none">– Configure target Jira address/project id and ticket description– Send access rights request for given user:<ul style="list-style-type: none">* Choose previously configured project and attach user to it by his email address
Requirements	<p>Minimal experience or eager to learn:</p> <ul style="list-style-type: none">• Language for backend logic (i.e. Java + Play Framework)• Language for frontend logic (i.e. JavaScript + Angular2 or Java + Vaadin)• Data Base knowledge (i.e. Postgres + Ebean ORM or SQL)• REST web services
Author	Blazej Krystek
Planned duration	1 semester
Team size	3-5

#4	SSL/TLS support in Facebook Presto big data drivers
Project goals	Extend Facebook Presto MongoDB and Cassandra drivers with SSL/TLS connectivity.
Scope definition	Presto is a distributed-query engine from Facebook that allows cross-querying different databases. Connection to particular database implementation is handled by Connectors. Presto connectors lack support for SSL connections to databases, that would allow for connections between Presto and databases via non-separated, even public network. At the moment such configuration requires setup of many SSH tunnels.
Requirements	Java, basic knowledge of PKI/SSL mechanisms
Author	Mateusz Wronski, Michael Dec
Planned duration	1 semester
Team size	1-2

#5	Website branding validator
Project goals	Sometimes the branding (i.e. name of company/product, logo or logotype) is changing. It would be useful to have a website crawler to walk the website and validate that all proper changes has been introduced.
Scope definition	A program in any form that will accept inputs as i.e. renames, brand colors etc. and will crawl given website looking for errors in logotype or branding.
Requirements	-
Author	Mateusz Wronski
Planned duration	1 semester
Team size	1-2

#6	Surveys
Project goals	Web application for making anonymous surveys. As an extension - mobile application.
Scope definition	Application should allow survey creation for dedicated group of people. It should provide complete anonymity. Participants and creators should be able to see the history of their surveys. Questions can have standard form (for example: true/false checkboxes, comboboxes, text fields, etc.).
Requirements	Nice to have basic JS knowledge
Author	Ewa Kaczmarek
Planned duration	1 semester
Team size	1-4

#7	Workshop environment
Project goals	Web application for creating programming workshops.
Scope definition	Application should allow workshop creation dedicated for any programming language. Required functionalities of application: splitting material into chapters, presenting step by step parts of code (with syntax highlighting), showing tasks for participants with timer.
Requirements	Web technologies knowledge
Author	Ewa Kaczmarek
Planned duration	1 semester
Team size	3-4

#8	Cross application notification system
Project goals	Implement micro service allowing to easy manage users notifications. Service should aggregate all notifications from applications and/or users. Provide also web component for simple embed and display notifications inside our applications.
Scope definition	<ul style="list-style-type: none">• Web component should allow to:<ol style="list-style-type: none">1. easy embed inside our applications;2. display aggregated notifications;3. dismiss single/all notification;4. show details and links;• Microservice should:<ol style="list-style-type: none">1. be secured source of data for web component;2. provide API for automatic notifications form applications;3. provide way to create manual notifications;4. allow to scope notification message by type (info/warning/error), applications and user/user groups;5. create easy way to notify end user about not read messages;
Requirements	-
Author	Dominik Markiewicz
Planned duration	1 semester
Team size	2-6

#9	Web component for display personalized applications dashboard
Project goals	Implement easy-to-use, personalized web component with our applications dashboard, allow to easily access internal nokia applications. Web component should be embedded by our applications in navbar and allow to fast open/switch application. There should be also centralized database with applications with some minimal interface allowing to register such applications.
Scope definition	<ul style="list-style-type: none">• Web component should allow to:<ol style="list-style-type: none">1. easy embed inside Our applications;2. display tiles with most-used and/or most-important applications;3. personalize displayed applications;• Microservice should:<ol style="list-style-type: none">1. be secured source of data for web component;2. should allow to register new applications with basic informations like icon, description, link etc.
Requirements	-
Author	Dominik Markiewicz
Planned duration	1 semester
Team size	1-3